THE VALUE OF UNIQUE DEVICE IDENTIFIERS IN ORTHOPEDIC SURGERY

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UDI IN ORTHOPEDICS
Introduction

Orthopedic Patients Receive Many Implantable Devices:

- Examples:
  - total joint replacement
  - fracture fixation devices
  - spine instrumentation
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Introduction

- We need a standardized unique device identifier in orthopedic surgery
- A world wide standard would be best
Value of a UDI:
- To individual patient (and his/her surgeon)
- To patients collectively: facilitates systematic implant tracking (registries)
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Individual Patient

What Implant is in a Patient?

• The surgeon needs to know
• It helps the patient
• Right now is often difficult to find out
What Implant is in a Patient?

- Ambiguous hospital records and operative reports
- Ambiguous or incomplete implant naming
Value of UDI:

- Implant removal
- Implant compatibility
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Example

66 yo man with instability after total knee replacement:

- Implant revision required
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Example

Value of UDI:

- Allows surgeon to know what instruments needed for implant removal
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Example

55 yo woman with with failed hip replacement:
• Socket revision required
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Example

- Which implants are present?
- Manufacturer
- Exact model
- Implant sizes
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Example

- Implant compatibility
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Systematic Following of Implants

Value of UDI to individual patients:

- A UDI also will help alert patients if a recall occurs
Value of a UDI:

- To individual patient (and his/her surgeon)
- To patients collectively: facilitates systematic implant tracking (registries)
Implant Registries:

- Follow outcome of implants in large populations
- Successful models for joint replacement – Scandinavia, Australia
- Goal:
  - trip-wire for problem implants
  - improve all results
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Systematic Following of Implants

Implant Registries:

• Goal: trip-wire for problem implants
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Implant Registries
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Systematic Following of Implants

Implant Registries:

- Goal: improve care of all patients
  - better implants
  - better surgery
  - less cost
American Joint Replacement Registry:

- Huge potential cost savings
Value of UDI:

- Unambiguous tracking of every implant
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Implant Registries

Value of UDI:
Registry can track:
- Implant In
- Implant Out
• Is hip resurfacing as good or better than conventional hip replacement?
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Implant Registries

Registry with UDI:

- Implant performance
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Implant Registries

Hospital

UDI

Hospital

UDI

Hospital

UDI

National Joint Registry
Value of UDI:

- Rapid, cost effective entry of data from point of care.....
- Into key databases (example: National Joint Registry)
50 yo woman: Dislocated hip since birth
UDI: did this method work?
UDI: Compatible implants for future surgeries